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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,384	03/28/2005	Kazuaki Bando	1207-116	4363
23117 7590 11/24/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
SCRUGGS, ROBERT J				
ART UNIT		PAPER NUMBER		
3723				
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11/24/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,384

Applicant(s)

BANDO, KAZUAKI

Examiner

ROBERT SCRUGGS

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 14 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment received on August 26, 2009. Claims 1-12, 14 and 19-24 have been cancelled therefore claims 13 and 15-18 remain pending in the application and have been fully examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13 and 15-18 are **Finally** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13, recites the limitation "said suction-cup moving means" in Line 7, Page 3 of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13, 15, 17 and 18 are **Finally** rejected under 35 U.S.C. 103(a) as being unpatentable over Bando (5396736) in view of Bovone (5433657) and Ercole et al. (4848005).

In reference to claims 13 and 15, Bando discloses a glass-plate working apparatus comprising, grinding means (8) for grinding a peripheral edge of a glass plate (22), grinding supporting means (19) for supporting the glass plate whose peripheral edge is to be ground by said grinding means and transporting means formed with multiple lifting devices, one lifting device (56a) (Figure 1) for raising the glass plate to be carried in, another lifting device (56B) for raising the glass plate on the suction cup to be carried out the lifting devices are mounted to a slider (55) which is linearly movable in one direction, wherein said grinding supporting means includes a grinding supporting table (19) and teaches of using a single sucker unit for sucking the glass plate, wherein said grinding supporting means is movable in a direction (i.e. Y-axis) different from said direction in which said slider is linearly movable (i.e. X-axis) (Column 4, Lines 44-49), but lacks, a plurality of suction cups held on said grinding supporting table being attached by suction to said grinding supporting table to suck and hold the glass-plate by sucking the glass plate whose peripheral edge is to be ground and arranging means for disposing said plurality of suction cups, respectively, at positions corresponding to a shape of the glass-plate to be ground, wherein said arranging means includes a suction-cup supporting body for supporting said suction cups separately from said grinding supporting table, a suction-cup lifting device for raising the suction cup which is supported by said grinding supporting table or the suction-cup supporting body, and a suction-cup moving device which is adapted to move said suction cup raised by said suction-cup lifting device from on said grinding supporting table onto said suction-cup supporting body or from on said suction-cup supporting body onto said grinding

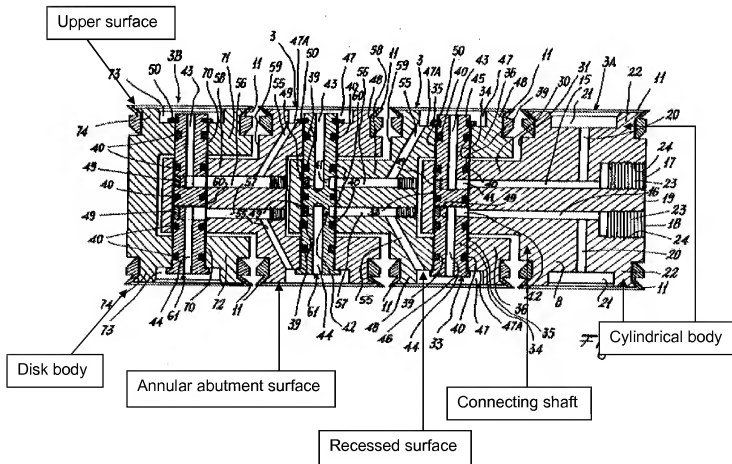
supporting table in correspondence with the shape of the glass plate whose peripheral edge is to be ground by said grinding means. However, Bovone teaches a technique for sucking a glass-plate (1) to a table (2) by using a plurality of suction cups (3) that can be arranged to the shape of the glass-plate (Column 3, Lines 44-49). One of ordinary skill in the art could have applied the known technique of securing a glass-plate to a table by using a plurality of suction cups that can be arranged according to the shape of the glass-plate, as taught by Bovone, in the same way to the device, of Bando, and the results would have been predictable. In this situation, one could prevent any bending forces arising on the glass-plate during operation. In addition, Ercole et al. teach a technique of providing arranging means that separately move work supporting elements (10) (Column 2, Lines 51-52, the work is not shown) from a worktable (2) by a linear movement of a pick-up tool (11) that is attached to a moving frame (3) (or slider) for selectively picking up said movable elements (10) from a support body (12) that supports said suction cups separately from said worktable (2) (i.e. the support body supports the elements at upper and medial portions which are separate from the lower portion of the element which the worktable supports and the examiner notes that if the applicant is trying to disclose different tables or different table surfaces for holding the elements than this to is also known in the art. One could provide two separate table surfaces or tables, one for conducting work (2a) and one for storing elements (2b) as evident by Ercole et al. 5625959, since table (2a) includes holes (9) and table 2b) does not.) and positions said elements on said worktable or picks up said elements from said worktable and positions said elements back in said support body (Figure 1). One of

ordinary skill in the art could have applied the known technique of providing automatic arranging means attached to a slider, as taught by Ercole et al., in the same way to the device, of Bando, and the results would have been predictable. In this situation, since Bando teaches that multiple lifting devices are mounted to a slider, the pick-up tool, as taught by Ercole et al., that selectively positions that work supporting elements could also be mounted to slider (55) thereby providing a device that can more accurately and quickly position work supporting elements according to the work being used thus saving time and expense.

In reference to claim 17, Bovone also discloses a suction cup formed with an annular abutment surface (see figure below), a recessed surface (see figure below) held by suction (through lines 15, 16, 20, 55, 56).

6. Claim 16, is **Finally** rejected under 35 U.S.C. 103(a) as being unpatentable over Bando (5396736), in view of Bovone (5433657), Ercole et al. (4848005) and Monforte (4809425). Bando in view of Bovone and Ercole et al. disclose the claimed invention previously mentioned above and Bovone further teaches that the suction cup includes a cylindrical body whose upper surface (see figure below) is covered with an elastic member (11) for abutment against the glass plate (1), a disk body (bottom portion) (see figure below) for abutment against said grinding supporting table and a connecting shaft (see figure below) which connects said disk body and said cylindrical body, but is silent in having a lifting device formed with grippers that move toward or away from each

other. However, Monforte teaches that a robotic arm can be formed with multiple types of end effectors (Figures 3a-3h) and that they are all equivalent of one another where one such arm includes grippers (Figure 3f) (210) that move toward and away from one another. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the arranging means, of Bando, with a lifting device formed with grippers (instead of a pin) that move toward or away from each other, in view of Monforte, in order to provide a lifting device that can pick up various size support elements and provide a stronger grasp on the selected element.



Response to Arguments

7. Applicant's arguments filed August 26, 2009 have been fully considered but they are not persuasive.
8. Applicant discloses that, **"wherein said arranging means includes a suction-cup supporting body for supporting said suction cups separately from said grinding supporting table, a suction-cup lifting device for raising the suction cup which is supported by said grinding supporting table or said suction-cup supporting body, and a suction-cup moving device which is adapted to move the suction cup raised by a suction-cup lifting device from on said grinding supporting table onto said suction-cup supporting body or from on said suction-cup supporting body onto said grinding supporting table in correspondence with the shape of the glass plate whose the peripheral edge is to be ground by said grinding means, wherein said transporting means includes one lifting device for raising the glass plate to be carried in and another lifting device for raising the glass plate on the suction cup to be carried out, wherein said transporting means and said suction-cup moving means share a slider to which said suction-cup lifting device, said one lifting device and said other lifting device are attached, and which is linearly movable in one direction, wherein said arranging means is adapted to move said suction-cup lifting device by a linear movement of said slider in said one direction and a movement of said grinding supporting table of said grinding supporting means so as to be capable of arranging said suction-**

cup lifting device at a position corresponding to a shape of glass plate on said grinding supporting table.”

a. However, the examiner maintains that the arranging means does include a support body that supports the elements separately from the table that the transports means and the arranging means moves said lifting device in a linear movement all of which was as previously discussed in the rejection above therefore the examiner believes the rejection is proper and thus maintained.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ROBERT SCRUGGS** whose telephone number is (571)272-8682. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RS

/Joseph J. Hail, III/

Supervisory Patent Examiner, Art Unit 3723